

Amendment to the Claims

1. (Amended) An isolated nucleic acid molecule comprising a polynucleotide having a sequence selected from the group consisting of:

(a) ~~a sequence encoding amino acids from about 1 to about 744 of SEQ ID NO:3;~~

(b) ~~a sequence encoding amino acids from about 2 to about 744 of SEQ ID NO:3;~~

(e) a sequence encoding amino acids from about 1 to about 691 of SEQ ID NO:6;

(d)(b) a sequence encoding amino acids from about 2 to about 691 of SEQ ID NO:6;

(e) ~~a sequence encoding amino acids from about 1 to about 724 of SEQ ID NO:9;~~

(f) ~~a sequence encoding amino acids from about 2 to about 724 of SEQ ID NO:9;~~

(g) ~~a sequence encoding amino acids from about 1 to about 795 of SEQ ID NO:12;~~

(h) ~~a sequence encoding amino acids from about 2 to about 795 of SEQ ID NO:12;~~

(i)(c) complements of the sequences of (a)-(h)(b);

(j) — a sequence having 50-2232 contiguous nucleotides from the coding region of SEQ ID NO:1;

(k)(d) a sequence having 50-2073 contiguous nucleotides from the coding region of SEQ ID NO:4;

(l) — a sequence having 50-2172 contiguous nucleotides from the coding region of SEQ ID NO:7;

(m) — a sequence having 50-2385 contiguous nucleotides from the coding region of SEQ ID NO:10;

(n)(e) sequences having at least 90%95% identity to the sequences of (a)—
(m)(b) – (d), wherein the polypeptide encoded by said sequence has kinase activity.;

(o)(f) sequences having 100-1500 contiguous nucleotides from the coding region of SEQ ID NO:1, SEQ ID NO:4, SEQ ID NO:7 or SEQ ID NO:10;

(p)(g) sequences having 500-1000 contiguous nucleotides from the coding region of SEQ ID NO:1, SEQ ID NO:4, SEQ ID NO:7 or SEQ ID NO:10;

(q)(h) sequences of (a) – (h)(b), except for at least one amino acid substitution in the encoded amino acid sequence; and wherein said sequence encodes a polypeptide of SEQ ID NO:6 with at least one amino acid substitution, wherein said polypeptide has kinase activity.

(f)(i) sequences of (a) – (h)(b), wherein said sequence encodes a polypeptide of SEQ ID NO:6 with except for a conversion of a conserved lysine to an alanine at an ATP binding site of the encoded amino acid sequence SEQ ID NO:6, wherein said polypeptide has kinase activity;.

(j) sequences of (f) – (g) wherein said sequence encodes a polypeptide having at least one amino acid substitution compared to the corresponding region of SEQ ID NO:6 encoded by said coding region; and

(k) sequences of (f) – (g) wherein said sequence encodes a polypeptide having a conversion of a conserved lysine to an alanine at an ATP binding site compared to the corresponding region of SEQ ID NO:6 encoded by said coding region.

2. (Original) A method of making a vector comprising inserting a nucleic acid molecule of claim 1 into said vector in operable linkage to a promoter.

3. (Original) A vector produced by the method of claim 2.

4. (Original) A method of making a host cell comprising transforming or transfecting a vector of claim 3 into a cell.

5. (Original) A host cell produced by the method of claim 4.

6. (Original) A method of making a polypeptide, comprising culturing the host cell of claim 5 under conditions such that said polypeptide is expressed and recovering said polypeptide.

7-25. (Withdrawn)